Popular Medicine and its Detractors.

See page 198.

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EDITED BY DR. ANDREW WILSON, F.R.S.E. &C.

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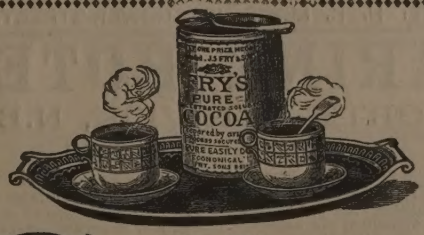

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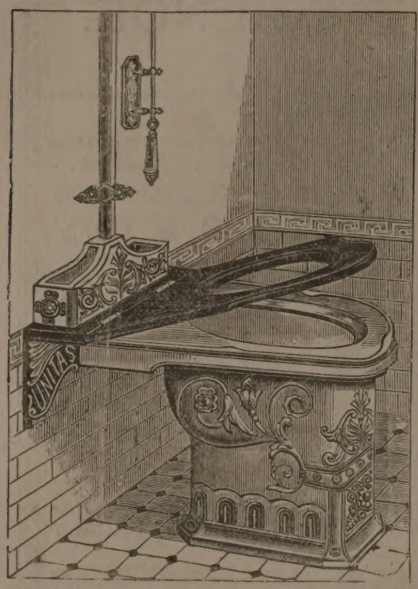

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◆ HEALTH ◆

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LONDON: *FRIDAY, DECEMBER* 27, 1889.

CONTENTS OF No. 351.

	PAGE
Notes by the Way. By the Editor.	197
Original Essays :—	
Popular Medicine and its Detractors. By a Physician	198
Personal Health :—	
Consumption	200
The Moral Influence of Climate. By Felix L. Oswald, M.D.....	200
The Family Circle :—	
Limps. By Dr. Joseph B. Blissell	202
Antiseptic Treatment of Small-Pox	204
Popular Science Papers :—	
Electrical Injuries	205
What is Buhach?	205
Public Health :—	
Disposal of Garbage in London.	206
Germs in Milk and its Products	207
Jottings from the Journals :—	
Fans or Hot Water—Oxygen Inhalation — Table Ware and Napery for Children	208-09
IMPORTANT ANNOUNCEMENT	210
Our Letter Box :—	
Rules for Correspondents	210
Queries and Answers :—Replies : General, Sanitary, and Medical	211

Notes by the Way

BY THE EDITOR.

"Health is the foundation of all our physical happiness."—*Herder.*

SAYS a writer, the boy who plays by himself no doubt exercises his spontaneity, but he generally repeats the same action over and over again; at cricket or football the individual boy has to fulfil the part assigned to him by the captain, and his action is thus controlled by that of his companions and the rules of the game. This more varied action, induced by that of other boys playing in harmony, causes a greater variation than when he plays alone, and gives a kind of mental training, bringing his brain more under the control of circumstances and more in touch with his playmates. The lonely walk or play gives free scope to his spontaneous individual thought and action; the social game dissipates much of his spontaneity, and harmonizes him with his comparisons. The dreamy but thoughtful boy may enjoy an opportunity of getting away from uncongenial companions; such a boy is said to be unsocial, and compulsory play in games may help to remove a bad predisposition, though the compulsion be irksome to him.

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THERE are other differences between the effects of unsocial play and unorganized games; the latter produce more exercise of the muscles and develop the physique better; a run under compulsion is a stronger muscular exercise than a lonely saunter. School is a preparation for active life; sociability is as well cultivated by organized games as by any other corporate action. There are, however, exceptional boys who cannot play games with credit, but who still need them. A wise despotism is necessary in the case of boys, whether in the home or school. Experience shows that the boy's likings do not necessarily indicate what is good for him; this is also one of the points that the schools cannot afford always to let the parent decide, and it is much to be desired that organized play and compulsory games were instituted for the Board schools.

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INNUMERABLE mistakes, says a writer, have been made through persons getting up at night to take or administer a dose of medicine in the dark. We have heard of few sadder accidents, however, than that recorded of the wife of a well-known physician of Harlem, in America. She had been suffering from sleeplessness, and got up to take a dose of bromide which she had been accustomed to use. By mistake she swallowed the contents of a bottle of Majendie's solution of morphine, taking sixteen grains of the drug altogether. Despite every effort she died in three hours.

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THE *Progrès Medical* gives a brief account of the international congress to protest against the abuse of tobacco, which was recently held in Paris. M. Ortolan made the interesting statement that the proportion of nicotine in tobacco is less when the stalks grow close together, and when the leaves are numerous and placed very low upon the trunk. This is the reason, he said, why the German, who smokes more than the Frenchman, poisons himself less. In the former country tobacco-growing is free, whereas in France it is regulated by the Government, and the number of leaves to the stalk is limited. French tobacco, he said, contains as much as six per cent. of nicotine.

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THE British Consul at Baltimore, in a recent report on tinned goods deleterious to health, says that all tinned or canned provisions that are hermetically sealed are packed in tins made of tin plate, or sheet iron superficially alloyed with tin. This is imported to the United States exclusively from England, as there are no tin plate manufacturers in the former country. 130,000,000 cans are made every year in Baltimore alone, 2,000,000 lbs. of solder are consumed in making them. Equal parts of block tin and lead form the best solder, but a baser kind composed of a larger proportion of lead is not uncommon. A flux of powdered resin, or a much more deleterious flux composed of chloride of zinc, containing free muriatic acid, is applied to the tin surface to be soldered, and the unfortunate and dangerous practice is to apply this on the inside. The use of an acid flux for inside soldering is alleged to be a source of danger to health, while the resin flux communicates its taste to the contents of the can.

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IN France and Germany all tins containing articles of food are soldered on the outside, and attempts have been made wholly to abolish inside soldering in the United States, but they have not yet been entirely successful. The first danger from the inside surface of solder is the direct solvent action of an acid fluid on the lead, when acid vegetables or fruit are preserved without syrup. The second source of danger is galvanic action. The American sardine has a particularly evil reputation as at present put up. The label is French in the well-known yellow and black letters, but the contents are not sardines, nor are they put up in *huile d'olive et pure*, but in cottonseed oil. Professor Tonry, of Baltimore, writes of one of these sardine tins, soldered on the inside, that fully a quarter of the interior surface of metal was eaten away. The fish in this tin were nearly all eaten by three persons, two of whom were children, and all were taken ill within half an hour, one child dying within twenty-four hours. A chemical examination of the viscera revealed lead, which was also found in the oil and in the remaining contents of the tin. The verdict at the coroner's inquest was that death resulted from lead-poisoning from a sardine tin improperly soldered.

A scientist has found in warts a germ which is always present in the prickle layer of the skin. It has distinctive qualities as regards its capacity for colour, and is found both between and in the cells. Its form is that of exceedingly delicate slender rods, the thickness bearing the proportion to the length of one to six. It is seldom found in the skin surrounding the warts, and is found most plentifully when the wart is recent. It is considered that the existence of a germ which is always present in warts and is never found in any other tissue explains many facts connected with the nature of these little tumours. May not this fact also possess a distinct bearing on the origin of cancer, to which disease, in certain of its forms, warts are nearly akin?

The following case of chronic eczema treated with Dee Oil is reported in the *Lancet* by Dr. Thomas F. Raven. His patient at the age of three began to suffer from eczema; it originated without doubt from injudicious feeding. The face was first affected, and subsequently the whole surface of the body. At different times the limbs, back, face, and neck would be most severely attacked. The disease proved intractable for a number of years, during which time he was twice in hospital, under the care of one of the most eminent dermatologists, and although much good was gained at the time, the improvement was not maintained for more than a few weeks.

"In February of this year," says Dr. Raven, "I commenced the use of Oleum Deelinæ. It was first applied to the left forearm, and in forty-eight hours the result was so good that I had it painted over the whole affected surface—nearly half of the body—night and morning. In six weeks the disease was practically cured, after thirteen years' duration, and although the patient has some occasional reminders of the old enemy, and the skin is still harsh and thickened, yet he is now, after eight months, capable of doing a fair share of daily work as an artisan, while his general health, which had considerably suffered, is proportionately improved.

The secretary of the Vegetarian Society, Mr. Joseph Knight, writes me from 75, Princess-street, Manchester, to announce that the title of the magazine of his Society is now the *Vegetarian Messenger*, having been changed from the *Dietetic Reformer*. He adds that he will be glad to send a specimen copy to any of my readers, together with other papers upon the subject, and information respecting vegetarian cookery books and other publications.

Sterilized milk since August 1st has been delivered to patients in their dwellings in certain American cities. The milk is sterilized by the Visiting Nurse Society of Philadelphia, for example, and taken to the child by the nurse in attendance, in the bottles in which it is prepared. Milk and bottles are furnished the parents at cost price. The results have been excellent.

Nothing so quickly restores tone to exhausted nerves and strength to a weary body, says an author, as a bath containing an ounce of aqua ammonia to each pail of water. It makes the flesh firm and smooth as marble, and renders the body pure and free from all odour.

Original Essays

"Life is not to live, but to be well."—*Martial.*

POPULAR MEDICINE AND ITS DETRACTORS.

A PROTEST.

By A Physician.

It is somewhat late in the day to attempt to vindicate the custom of writing intelligible articles on medical and hygienic subjects. The public demand for it is evinced by the ever-increasing supply. It is useless, however, to deny that a strong prejudice against "popular medicine" still survives among medical men, especially those of the older school. The *Lancet* has recently more than once mildly condemned the practice, and so we again take up the cudgels on our own behalf.

What is popular medicine? It simply consists in the art of writing plain and easily understood accounts of medical facts by those who have a gift that way; and only the most bigoted may or can cavil at that. Every man who qualifies as a surgeon may not care for the routine of practice. If he has a taste for literature, why, therefore, should he not turn it to account?

We should have thought that a paper like the *Lancet*, which affects a supreme regard for the best interests of the medical profession, would have expressed its gratification that medical men were able to popularize the subject of medicine. It was not always so. A hundred years ago, any man who had a taste either for science or literature would never have entered the profession of medicine at all. All other sciences have their popular exponents. When men like Tyndall and Huxley write on subjects connected with their special branches, and lecture on them to mixed audiences, we think no medical man who has tried to teach people how to deal with a catarrh or recognize an infectious fever, need be ashamed of his vocation.

It is true that there must be limits to popular writing. No one would think of defending the practice, if it exists at all, of discussing the technicalities or the intricate problems of medicine. Only the plain and undisputed facts should be, and as a rule are, described by popular writers, and only such rules of treatment as can safely and easily be carried out at home should be described. In this journal we have never knowingly overstepped these bounds. Till we are convinced of our error, we shall continue to expound the recognized truths of hygiene and popular medicine for the benefit of the people.

Again, we would ask the *Lancet* a pertinent question—If it is so very unprofessional to write popular articles on medicine, why is the *Lancet* exposed for sale on every one of Messrs. Smith's bookstalls? It is the only medical journal to be found there. It cannot be so exposed for the convenience of medical men; for every one who demands a special journal of the kind orders it from his newsagent. It can only be in the hope of increasing its sale among laymen. So, stickler for "professional" propriety as it deems itself to be, the *Lancet* stands condemned of this practical hypocrisy—that it preaches against popular medicine, and yet tries to vend its own wares among the crowd.

Doubtless, our contemporary thinks it to be its bounden duty to disemburden itself of occasional growls at our work; for there is no gainsaying the fact that these growls do represent the views of a certain class of medical practitioners. Let us deal, then, with their objections.

Broadly speaking, their objections can be summed up

in one sentence. They say it is unfair for a medical man to inform the public how to treat themselves. We need not point out the ignoble position in which this places such objectors. We may deny, first of all, that it is unfair. The profession exists for the public. And, secondly, it has always been the proud boast of doctors that they only wish to do their best for their patients. Now every practitioner of experience can call up scores of cases to which he has been called only to find that a very wrong treatment has been pursued. Had the friends of the patient known the plain principles of treatment, the doctor's duties would have been simplified, and the patient's welfare more readily secured.

It may be urged against this view that, while all we are saying is very true, it is quite impossible to make people understand the proper use of remedies and the recognition of diseases by popular handbooks, by journals, or by familiar lectures. To this argument the reply is that some men may not be able to write plainly, but that there are others who can. If people misunderstand easy and familiar directions, that is their own fault. The popular author writes for the intelligent reader. Take Cassell's "Family Physician"—a well-known volume written, by the way, by hospital physicians and surgeons—what wise medical man, let us ask, would object to the majority of his patients reading and studying that work?

The real objection some medical men have to popular medicine is that they do not wish their patients to be well-informed, because they are ignorant themselves. They have a certain command of the jargon of the books, and exhibit a certain rule-of-thumb treatment. They recognize a case as one of bronchitis, say, and immediately jump to the conclusion that therefore ipecacuanha must be given. They call a chilblain a "local gangrene," and give their usual remedies. But they never think out the problems presented by their cases from a physiological aspect. They never inquire into the cause of that bronchitis and try to see if it differs in any way from other cases before they give their ipecacuanha. They never think and reason *why* a chilblain is a "local gangrene," and, indeed, have no rational and intelligible theory of gangrene at all. When their patients, who have acquired some knowledge of the rudiments of physiology (which is the basis of all rational medical treatment) ask questions, they are non-plussed, and pour ignorant and contemptible abuse on the writers who have given their clients that knowledge.

The truth is there are not a few doctors who desire still to pose as "mystery-men." They are too lazy to read and too vacuous to think. It suits them better for a patient to come and think he can get a "bottle" from his doctor which will drive some subtle and unintelligible entity out of his frame, than to take the trouble, the time, and the thought, to give him a plain, succinct account of the nature of his malady. For such men we have neither pity nor consideration. If our work is grateful to the public we are amply repaid, despite the objections of practitioners of the class just noted.

Most men write popular medical works either because they like it or because they wish to bring their names before the public. Surely that is a laudable enough ambition, (provided they refrain from quackery), which, however, is by no means limited to medical men of low degree. It is quite as legitimate and quite as honourable a method of "obtaining a connection" as buying a practice or assisting an elderly specialist. If a man gains the confidence of people by showing them that he can write sense and that he understands his business, he has surely nothing to be ashamed of. We may add that he has done nothing incompatible with the highest and the strictest demands of "professional etiquette."

If the *Lancet* has the honour of the profession at heart, we can recommend it some better subjects for literary diagnosis and treatment than popular medicine. Let it insist on a more severe entrance examination to the profession. Let it do something to stop the nefarious trade in "dispensaries." Let it show medical men that there is something unspeakingly contemptible in the eager competition with each other to attend "club" patients at the pittance of three shillings a year. In fact, let it try too infuse a higher tone altogether into the medical profession, so that its members will not think their object in life is simply to make up pills and potions for the old women of both sexes.

ONE of the New York papers having offered a prize to the metropolitan mother who had successfully reared the largest number of boys and girls, it was carried off by the mother of fifteen children, all living, the youngest being five years of age. The father of this interesting family was one of fifteen children, some of whom have died, but the mother is one of fifteen, all of whom are living, some of them at advanced ages.

EFFECTS OF ALCOHOL ON THE MIND.—It is one of the curious errors that alcohol stimulates the imagination, and gives a clearer, more practical insight into the relation of events of life. The whirl of thought roused up by the increased circulation of the blood in the brain is not imagination; it is not a superior insight or conception of the relation of events, but is a rapid reproduction of previous thoughts, soon merging into confusion. The inebriate never creates any new ideas or new views; all his fancies are tumultuous, blurred, and barren. The apparent brilliancy is only the flash of mania, quickly followed by dementia. Alcohol always lowers the brain capacity, and lowers the power of discriminating the relation of ideas and events. After a few periods of intoxication, the mind under the influence of spirits is a blank blurred page. The poets and orators who are popularly supposed to make great efforts under the influence of alcohol only repeated what had been said before in a tangled delirium of expression. The physicians who are supposed to have greater skill when using spirits have paralyzed their higher brain centres, and have lost all sense of fear or appreciation of the consequences of their acts, and hence act more automatically, simply doing what they have done before without any clear appreciation or discrimination of the results. The inebriate is the best of all imaginative persons, and the one in whom the higher brain forces of judgment, reason, and conception are the first to give way. The man who uses spirits to give mental force and clearness is doing the very worst thing possible to destroy this effect. Alcohol is ever and always a paralyzant. It never creates anything; it never gives strength or force that did not exist before; it never gives a clearer conception and power of execution, but always lowers, destroys, and breaks down.

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Personal Health

"Be timely wise;
With health all taste of pleasure flies."—*Gay.*

CONSUMPTION.

CONSUMPTION, or phthisis, is one of the most prevalent diseases in this country. It usually attacks people between twenty and thirty, but is not uncommon at a more advanced age. It occurs frequently in stonemasons, grinders of steel instruments, miners, tailors, sempstresses, and others whose occupation is of a sedentary nature, and exposes them to the inhalation of dust. Impure air, constant bad food, dissipation, and deficiency of exercise are all common exciting causes.

It is said that it may arise in some cases from deficiency in mastication, due to loss of teeth. The mortality in England from this disease alone is very great, and it has been pointed out that the death-rate from consumption is inversely to the dryness of the situation. Judicious subsoil drainage would do much to decrease the prevalence of what may be considered a national malady. The chief symptoms of this fell disease are cough, expectoration, spitting of blood, night-sweats, shortness of breath, and general wasting.

Some or all of these symptoms may be present. The spitting of blood may amount to only a few teaspoonfuls, or the amount brought up may be very great indeed, so as to endanger the life of the patient. The cough is usually distressing, and frequently keeps the patient awake at night. The expectoration varies in character and in quantity; sometimes there is very little, sometimes it is thick and yellow, and brought up with difficulty. The shortness of breath is not a very prominent symptom, and often gives no trouble until near the end.

The loss of flesh is generally progressive, the patient in a few months being reduced to almost a shadow. The temperature as shown by the thermometer is always elevated, the amount of fever often being as much as four or five degrees at bedtime.

It may be said, speaking generally, that consumption is not curable, but under judicial medical supervision a great deal may be done to ameliorate the symptoms and prolong the life of the sufferer. Some years ago it was considered that the duration of consumption in this country in each individual rarely exceeded two years, but since the introduction of cod liver oil, extract of malt, and other remedies, patients frequently live many years, their term of life being but little shortened. The remedies which have to be taken in this condition are various, and the most important of them is cod liver oil, which, to most patients, is not palatable unless combined with Kepler Extract of Malt. We believe this combination can be had in the form of the Kepler Solution of Cod Liver Oil; and it is said that patients grow fat upon it when other forms of oil are productive of distress and pain.

Expectoration may be facilitated by the administration of Tabloids of Chloride of Ammonium—one or two three or four times a day—and when the throat is painful from excessive coughing, a Voice Tabloid may be taken. It is frequently necessary to ensure a change of air for the patient, and the principal seaside resorts in this country suitable for invalids are Ventnor, Bournemouth, Hastings, and Torquay. In advanced cases, it is sometimes necessary for the patient to undertake a sea-voyage either to Australia or the Cape of Good Hope.

THE MORAL INFLUENCE OF CLIMATE.

By FELIX L. OSWALD, M.D.

A PHILOSOPHIC advocate of religious tolerance holds that "the most effective way to explode a popular fallacy is to explain it." If we should apply that method to the exorcism of the mediæval spectres that still haunt the by-ways of the nineteenth century, we might say that the moral aberrations of the middle ages sprang chiefly from the *tendency to underrate the moral effects of physical causes.* If the chronic despondency of a mediæval dyspeptic reached the phase of suicidal temptations, his confessor would advise him to defeat the wiles of the arch-fiend by devoting his leisure to the recitation of a few thousand paternosters. If peppered hash and want of exercise had vitiated the temper of his wife to an unbearable degree, he was instructed to consider the visitation a judgment incurred by his unbelief, or by his opposition to an extra assessment of the tithe-collector. The epidemic increase of the alcohol habit was persistently treated as a disorder amenable to the influence of prayer meetings. For nearly a thousand years the history of European morals was, indeed, the history of the efforts and failures of visionaries who hoped to reconcile the promotion of ethical reform with a total neglect of physiological studies.

Since the revival of naturalism, however, the tendencies of educational reform make it probable that the progress of moral philosophy will become identified with the development of a new science, thus far only outlined in a few incidental treatises on the *interaction of body and mind.* The possibilities of that science are suggestively indicated by the results of the statistical studies devoted to one of its branches—the moral influence of climate. Modern French scientists are nothing if not methodical, and have repeatedly called attention to the curious regularity in the geographical distribution of certain vices and virtues: intemperance, for instance, north of the forty-eighth parallel; sexual aberrations south of the forty-fifth: financial extravagance in large seaport towns; thrift in pastoral highland regions. It is, indeed, a remarkable circumstance that in the home of the best wine-grapes, in Greece and southern Spain, drunkenness is far less prevalent than in Scotland, or in Russian Poland, where Bacchus can tempt his votaries only with nauseous *vodka.* The idea that a low temperature begets an instinctive craving for alcoholic tonics seems disproved by the teetotalism of the Patagonian savages, who horsewhip every Spanish stimulant-monger without benefit of clergy. The Lesghian mountaineers, too, observe the interdict of the Koran in the icy summit-regions of the Caucasus; but there is no doubt that the bracing influence of a cold climate affords a certain degree of immunity from the debilitating effect of the alcohol-vice, and that a Scandinavian peasant can for years survive the effects of a daily dose of alcohol that would kill an Egyptian fellah in a single month. But it is equally certain that the temperance of south-land nations is considerably facilitated by the abundance of non-alcoholic pastimes. The Spaniards have their fandangos and bull-fights; the Greeks their border-raids, cocking-mains, and horse-races; while the Scotchman, after six days of hard work, is confronted with the choice between the delirium of an alcohol-fever and the appalling tedium of Sabbatarian asceticism, and naturally chooses the less dismal alternative.

The question, though, remains, if religious gloom is not an outcome of climatic influences. Cardinal de Retz, indeed, held that orthodox loyalty is a flower that cannot flourish north of the Alps; but it is more than probable

that the survival of that plant has been greatly assisted by the conniving *bonhomie* of south European ecclesiastics, who, centuries ago, began to appreciate the wisdom of extending the practice of renunciation to the claim of consistency. The "climate of superstition" cannot be defined by geographical specifications; but, as the gilded clouds of the south float grizzly over the moping firmament of the North, dogmas which the inhabitants of the lower latitudes manage to reconcile with a good deal of secular beatitude are apt to assume a gloomy character in the land of the hyperboreans, whose rational rigourism, however, may recalcitrate against self-contradictory tenets, and accept a thoroughly uncomfortable more readily than an illogical doctrine. Thus we find the Nahagathas, the Protestants of Buddhism, confined to Japan and Northern China and the schismatic Shiites to the Islamized highlands of Central Asia. The most obstinate dissenters of the Greek Church have their strongholds in Northern Russia, while the heresies of the Cossacks are limited to ultra-convivial celebrations of ecclesiastical holy-days. Even in ancient Greece the South-Hellenic Spartans seem to have been much less heterodox than their North-Hellenic rivals.

The supposed concomitance of low latitudes and low morals—in Origen's sense of the word—is a theory considerably modified by the reports of our latter-day North-pole explorers. Chamisso, Pallas, Adams, Gabriel Sarytchew, and Kane agree that certain tribes of the polar regions are sensual to a degree that would have scandalized the natives of ancient Lesbia, and certainly suffices to amaze the modern Cossacks, who, in their turn, astonish the not over-scrupulous moralists of the Danubian principalities. Among the Yakoots of northern Siberia *mésalliances* of an unmentionable kind are condoned as readily as a still more unprecedened degree of sexual precocity which Chamisso ascribes to the "almost exclusively animal diet of the wretched pygmies." Our equally carnivorous Indians are, however, characterized by a sexual apathy which an able American ethnologist seems inclined to consider a principal cause of their gradual extinction; and Chamisso's hypothesis must probably be supplemented by other explanations—for instance, the enforced idleness of his pygmies during the snow-bound season of short days and overlong nights. Idleness may likewise account for the erotic excesses of islanders enjoying the benefits of a fertile soil and a genial climate, like the notorious natives of various parts of the Grecian Archipelago and the Lesser Antilles, not to mention the *ne plus ultras* described in the reports of the first South Sea explorers. As a rule, the prevalence of incontinence bears an inverse ratio to the predominance of *active* modes of life; in any sense of the word, the continence of hunters and nomads being almost rivalled by that of intensely industrial communities.

Cæteris paribus, however, precocity increases with the distance from the isotherm of Stockholm, about the sixtieth degree of northern latitude in Europe and the forty-fifth degree in the western hemisphere. North of that parallel, the stunted and short-lived hyperboreans marry as early as the premature children of the tropics, tropical highland regions generally excepted. The copper-coloured natives of the Peruvian *alturas* marry late; while under the same parallel the creoles of the Brazilian lowlands do not hesitate to encourage the matrimonial propensities of children in their earliest teens, boys of fourteen and girls of thirteen and twelve, or, if we shall believe Dr. Burmeister, even of ten and nine. The courtships of Sicily, too, are expeditious, even from an Italian point of view; while on the island of Corsica, a peculiar state of agrarian difficulties has counteracted the influence of climate. Many of the *campanitas* or small terrace-plains have been so utterly exhausted that the available means of irrigation fail to redeem the impoverished soil, while a large percentage of the productive area is in the hands of the convents, which reserve the right of tenure for their old retainers. Combined with the straits of that land-famine, the over-increase of population became such an unqualified evil that the common sense of the peasants originated a system of ostracism, attaching infamy and social excommunication to the preliminaries as well as to the results of marriage before a specified age. In France the enormous burden of taxation has practically led to an identical result, and the prevalence of a mode of existence which Edmond About calls the "celibacy of prudence" is no longer confined to the larger cities.

The late marriage of mountaineers, too, may be partly explained by their instinctive love of independence. The sterile soil of a highland region necessitates far and frequent excursions in quest of the means of subsistence, and the unencumbered privilege of personal freedom thus became often a condition of survival. With a marmot and a hand-organ, if not with a marmot alone, the young Savoyard perambulates Europe from end to end till he has accumulated the equivalent of an Alpine competency. The *monteros* of the upper Apennines roam Italy like gypsies, ready to do any man's harvest-work. Young Scotchmen cross the Tweed or even the Atlantic before they venture to run the risks of matrimony on the precarious resources of a Highland moor. The scantness of population, and the consequent distance from neighbour to neighbour, help to train highlanders in the habits of self-help, and thus form that instinct of independence which has generally justified the proud motto of West Virginia.

A similar cause, however, would seem to have produced a similar result among all true nomads, who likewise are obliged to

"Make each day earn the daily right to live."

But while the patriotism of the Arabs and Turkomans (as well as of the originally nomadic Hebrews) takes the form of an exportable national pride, a sort of hygienic intuition appears to teach mountaineers the superiority of their native climate, and make them averse to a permanent change of habitation. Highlanders, though the stoutest defenders of their native soil, have, therefore, rarely engaged in wars of conquest; and the most *expansive* nations, to use a Bismarckian euphuism, were generally lowlanders — Prussians, Russians, Arabs, Mongols, Goths, and Tartars. We might add Romans, for the tide of conquest which inundated all the coast-lands of the Mediterranean originally emanated from the plains of Latium; and, if Mr. Katkoff's prognosis should be fulfilled by the disintegration of the American Union, it would be safe to predict that the larger part of our present territory would be reconsolidated by some eupeptic lowland State, Missouri or Michigan, and that the Alleghanies would maintain their independence by the stubborn resistance of their highlanders. The nomadic herders of western Texas, too, might prolong that resistance for many years; but, on the whole, the march of the new empire would follow the course of the Mississippi, for the double reason that the stream of conquest has generally moved seaward and southward. Russia will not rest till her fleet rides the eastern Mediterranean as well as the Euxine. Tamerlane avowedly intended to extend his empire to the Atlantic; and, from the campaigns of King Cyrus to the expansive

enterprises of Victor Emanuel, nine out of ten international wars have ended with the victory of northern nations over their southern neighbours. The goddess of fortune would decline to be crowned with a fur cap, and the sun of the south that turns a lynx into a lion does not necessarily reverse the process in the case of the human animal; but it is true that a rigorous climate evolves superior "staying power," and in war the last shout is worth a dozen challenges. The history of Europe might, indeed, encourage the idea that certain northern nations love war for its own sake, though Prof. Vogt informs us that gratuitous combativeness is a sign of specific inferiority. "Ants and wasps that tackle every wayfarer," says he, "cannot compete with the species that reserve their energy for serious emergencies, and without the protection of the dog-fancier, the breed of bull-dogs would speedily succumb to their preposterous propensities." Waspish aggressiveness would rather seem to be a product of sterile plains, that appear to bristle with stilettos as spontaneously as with cactus-thorns—the brigandage of Turkistan and stony Araby having its exact analogue in the kidnapping and train-robbing rowdyism of our arid South-west.

Nor is it quite certain that the "instinct of industry" can be considered an exclusive product of the higher latitudes. When all northern Europe was still slouching in bear-skins, Egypt and Phœnicia were buzzing hives of industrial activity. Our North American Indians had only wigwams when Mexico was studded with palaces. But here, too, the virtue of perseverance seems to have prevailed against the talent of initiation, and the energy of the North, once started in the arena of industrial competition, has managed to distance the earlier enterprise of the South.

Civilization, in the modern sense of the word, is, however, to a large extent, founded on the activity of the instincts of co-operation and altruism, both of which are undoubtedly stimulated by the emergencies of a rigorous climate. A hard-headed northlander who has himself been snow-bound and frost-bitten will not ignore the distress of a help-needing neighbour; while the religious charity of the Siamese peasant is apt to be modified by the reflection that, after the total loss of their fruit-crop, his storm-stricken brethren in Buddha can still eke out a tolerable living in the woods.

PHILOSOPHERS have noticed that when a man makes up his mind that he has got to practise economy he generally tries to begin with his wife's expenses.

BURIAL REFORM.—Captain James, Chairman of the Sanitary Committee of the London County Council, presided last week at a meeting of the Council of the Church of England Burial, Funeral, and Mourning Reform Association, at the Church House, Westminster. It was resolved to urge upon the medical profession, and sanitarians generally, the desirability of adopting the following specific reforms:—1. The adoption of every necessary sanitary precaution in the interests of the living, instead of paying inordinate (or too little) regard to the mortal remains. 2. Burial as soon as decomposition has set in, instead of undue retention of the body above ground. 3. The use of a readily perishable, inexpensive coffin of compressed pulp or the like, instead of a heavy, costly coffin of durable wood or the like. 4. Proper sanitary burial in earth sufficient and of a nature to effect the dissolution of the body, instead of imperfect, insanitary burial in a durable coffin in a vault, bricked grave, or already crowded pit.

The Family Circle

"The child is father of the man."—*Wordsworth.*
"In bringing up a child, think of its old age."—*Joubert.*

LIMPS.

BY DR. JOSEPH B. BISSELL,

Instructor in Surgery, N.Y. Postgraduate School; Attending Surgeon, Bellevue Hospital, Out-door Department.

CRIPPLES are so common a sight in every-day life that, unless our attention is arrested by an aggravated case, we pass them daily with hardly more than a sympathetic look. Yet, our feelings would surely be aroused if we realized that most of these cases are due to the neglect of some one who had charge of them in their early years.

A fair amount of care and consideration (after proper instruction, perhaps), on the part of mother or nurse of these maimed ones in their infancy, would, in all probability, have made the difference between a human being capable of earning a living and a useful and happy member of society, and a miserable, decrepit, defenceless creature, dependent upon the community for its livelihood and upon charity for existence.

The greater number of deformities begin in infancy and childhood. In the large proportion of these the earliest indication of the trouble is a limp. This lameness is a danger signal which nature hangs out, and is, therefore, of great significance. It is full of importance for the child's future; for if attention is paid to it, and, as a consequence, treatment is begun in this early stage, the disease itself, and certainly lasting deformity, and in some cases even death, may be thus averted. Often, of course, lameness means simply a slight, superficial and very temporary injury, as a cut or a bruise to the skin, muscles, or ligaments; but in a certain class of children, at least, the limp is more than likely to be a symptom of disease. In such a case the proper treatment is immediately and imperatively demanded. At times, so uncertain in its aspect is the disease that it is impossible even for a skilled observer to be certain from one or several examinations that the limp is not due to disease. How important is it, therefore, that even a slight lameness should not be carelessly put out of mind by the mother or by indiscreet friends, and allowed to go on until the trouble has resulted in more or less permanent deformity, which might have been prevented. Much better is it that the child should, from time to time, be under the eye of a surgeon, even if it should turn out, after all, that there had been no serious disease, than to learn too late that neglect and ignorance, or rather carelessness, had added another to the army of cripples.

There are different kinds of limps, varying in their degree and greatly in their importance. Of course, if a child cuts its foot or some one steps on its toes it will walk lame. There the cause is as evident as the effect, and we need pay it no further attention if the injury is not a serious one. The serious limps have certain characteristics which can be clearly defined.

A lameness not at all uncommon between the years of three and twelve is that due to chronic inflammation of the bones of the spinal column. The little patient walks with extreme care. He is afraid of stepping too heavily. The backbone is held stiffly. In stooping he holds his back as straight and stiff as a poker. The normal flexibility of the spinal column is absent. Instead of playing about with other children, he is continually seek-

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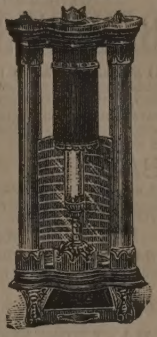

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ing the recumbent position on his face or back. He breathes sometimes with a short grunt or moan, especially during sleep. At times he may have pain in the abdomen which the parents think is due to something he has eaten. Such symptoms as these warrant an examination by a surgeon.

There is another condition of the spinal column causing a peculiar gait in children, though more frequently at a later age than the above trouble. It is known to mothers as a "twist in the spine." The lameness which accompanies it is never very prominent, and often is not present or is not noticed. It is due to one leg being at a slightly higher level than the other, to compensate for the lateral deviation of the backbone. Commonly these children assume a faulty position in sitting or standing, one shoulder being always higher than the other, and the shoulder-blade projecting from the back. The whole of one side of the ribs along the backbone bulges out, and there is often a pigeon-breast deformity in the front of the chest.

Some babies are born with the socket into which the head of the hipbone fits wider than normal, thus letting one or both hipbones slip out of place partially or completely. This causes a peculiar rocking motion in the gait; if only one hip is out of place the child sways a great deal to one side—to that side which is shorter than the other. The hip of that side is broadened. When the trouble is on both sides the motion is almost a waddle, and both hips are broadened. The stomach sticks out, and the child has a peculiar flexile, undulating gait. Such patients are rather shorter in stature than other children of the same age.

The most important of all the varieties of lameness, because of its frequency and because of the serious and even fatal results which often follow it, is that belonging to disease of the hip-joint. It comes on gradually, without apparent cause, getting better or entirely disappearing at times, to return again later, and in a more marked form each time, but lulling the victim and its relatives into a sense of false security until it is too late. In this common bone inflammation, the earlier it is discovered the greater are the chances of recovery without abscess or deformity. A moderate amount of knowledge on this subject would have taught the mother that at the first suspicions of trouble in walking the child ought to have been placed under the observation of some one competent to judge of the condition and the necessity of treating it. The deceptive and misleading manner in which this form of lameness appears tends to make one think it of slight consequence. The child is usually quite lame for several days or longer, then the limp disappears, to return again after a variable period. Though it may be a little more marked this time, still, as it went away before, it is naturally supposed that the trouble will pass away again, and it often does, to come back, however, worse than before. Attention to this difficulty is for this reason postponed even for months. So gradual is its onset that the parents hardly realize how bad it has become, especially as the usual officious family friend and adviser very likely insists that it is due to too rapid growth or to "habit," whatever that may be. Meanwhile the disease has been steadily advancing from the very first sign of lameness. Children afflicted with this trouble walk with some obstruction to the natural freedom of movement at the hip. This joint has all its movements restricted. The patient leans to the affected side, often wincing at each step, and putting the hand to the hip as the foot touches the ground. As he walks, the spinal column can be seen to move much more than normally, and the whole side of the body seems to move with the hipbone. Pain in the inner side of the knee is almost always present in the early stages of this trouble, and later there is more or less swelling over the hip-joint.

A limp which comes on slowly and almost imperceptibly at first is that due to some disease about the knee-joint. The lameness is sometimes very marked before any pain is noticed. When it first appears a dull, aching pain at the knee may come on for a short time and then disappear. Often there is little or no pain during the day, but at night, when the muscles about the joint are relaxed and the joint surfaces are suddenly brought together, the child starts out of his sleep with a shriek, due to pain at this point. As soon as he awakes, the muscles involuntarily relieve the pressing surfaces, and the pain ceases before the little patient is aware of the cause; hence this is sometimes taken for an attack of indigestion or nightmare, and the real trouble is obscured. Such a patient walks with the leg kept straight and stiff, bending the knee very little, if at all, so that it reminds one of a peg-leg. Examination shows the affected knee to be thicker and rounder than the other, none of the sharp angles showing as is natural, and perhaps the knee feels somewhat warmer than the well one. As the disease goes on the knee slowly becomes bent at an angle, and this angle becomes so fixed that a permanent deformity is the result, if abscess and loss of the knee-joint do not terminate the case.

An ankle limp is present when there is disease in the bones about the ankle. It is characterized by well-marked lameness and pain at this location, which steadily progress. The foot is put down with great care and tenderness. It is allowed to rest on the ground a much shorter time than the sound limb. The steps are short and the joint is kept stiff and immovable. The ankle is broadened and swollen, and to the hand is warmer than the opposite one. It may end in destruction of one or part of the bones and a running sore at this point.

Another variety of lameness is that which accompanies a weakness of the ligaments supporting the arch of the foot. In this case the instep gradually sinks so that part or all of the sole under the instep touches the ground. Such children walk flat-footed. They complain of pain radiating from the instep up to ankle and toward the toes. It resembles the pain of rheumatism. If such a child is observed with the feet bare it will be noticed that a larger portion of the bottom of the foot just under the instep touches the ground than is normal. If there is any doubt about this to the mother's eye, she can be easily convinced by moistening the soles of the feet and then standing the child on dry paper. The foot will leave a wet impression wherever it touches the paper, and a pencil mark around the edges of this before it dries will give a permanent outline. If more than the outer third of the sole is against the ground in this situation it is abnormal, and usually needs treatment to prevent any increase of the trouble.

In children who have had slight or more severe attacks of paralysis, due to an inflammation or disease of the spinal cord, there is a peculiar limp, caused at first by simple loss of muscular power, later by deformities of the feet or legs as a sequel of this paralysis. In such cases the lameness has never any element of pain in it. The helpless way in which the limb is swung along in walking, in the more marked cases, renders any doubt of the cause impossible. In the slighter cases the lameness is sometimes quite difficult to classify, but usually careful observation will show loss of power in some part of the foot or limb; as, for instance, in the most common

example the toes drag a little in stepping forward. The part affected usually feels colder to the hand if placed upon it than the same part on the opposite side.

These are some of the more common limps which may be seen any day in the great dispensaries for sick children in this city. All of these are capable of more or less relief, and most of them of complete cure. The earlier this condition is discovered and treatment begun, the more certain is the chance of cure. Hence the great importance of even a slight amount of knowledge on this subject.—*Babyhood.*

ANTISEPTIC TREATMENT OF SMALL-POX.

ALTHOUGH, fortunately, in this country, says the *New York Medical Record*, and at this time, few practitioners are ever called upon to manage a case of small-pox, the disease is yet by no means so effectually stamped out that we can afford to ignore any advances that may be made in its treatment. In countries where vaccination is generally or universally practised, the opportunity to study this disease is, as a rule, too restricted to be productive of any satisfactory results, and we must look, therefore, to other lands than ours for news of progress in this field. Of course there are hospitals in this city, as elsewhere, in which, in the course of a year or of a series of years, many cases of small-pox may be seen, but the incentive to study the material there offered is not great, since public interest in the result of such study is but feeble.

There is, however, a country where the question is one of absorbing and perennial interest, and where one may be sure of finding an appreciative audience to listen to any reports of progress made in the treatment of small-pox. This country is Turkey, though throughout the Orient much the same condition prevails, as vaccination is so little practised there as to be almost unknown to the natives in many districts. In Constantinople there is not a physician who is not called upon to treat many cases of the disease every year, and he often sees it in its most dangerous and most loathsome forms. One may readily understand, therefore, that the question of variola and its treatment is not without interest to the resident of that picturesque but insanitary city. It is, of course, among children that the disease works its greatest ravages, since here is to be found the best material for it to act upon, and a large proportion of the mortality of young children is due to this cause.

Dr. Lewentaner, of that city, speaks very encouragingly of the success attending an antiseptic method of treating the disease which he tried in several cases. This method consisted in the application of an ointment composed salicylic acid, three parts; starch, thirty parts; and glycerine, seventy parts. The ointment was applied to the face by means of a mask, and also to the other parts on which the eruption was marked. Notwithstanding that the eruption was confluent in many places, large bullæ filled with pus being present, the lesions all dried up without rupturing, and left no cicatrices to mark their site. In addition to this external application, a mixture of quinine in cherry laurel water, oil of sweet almonds, and syrup of orange flowers, was employed. A small quantity of this mixture was dropped on the tongue and back of the pharynx by means of an ordinary medicine-dropper, three or four times an hour. This served to keep the mucous membrane of the mouth and pharynx moist while supplying at the same time a certain amount of quinine. There was about one grain of this drug in one and a half drachms of the mixture.

The advantages of this method of treatment are summed up by the author as follows:

1. All the children treated in this way recovered, although the ordinary mortality of the disease is 40 per cent.

2. The duration of the disease was decidedly shortened, the period elapsing from the commencement of the eruption to the falling off of the crusts being twelve or thirteen days.

3. The disease ran its entire course almost without fever.

4. The danger to those around the patient is greatly lessened. In the author's cases there were other children exposed, but notwithstanding that they were not vaccinated, they did not contract the disease.

5. The simplicity of the method, as compared with the treatment by baths and cold applications, has much to recommend it.

6. Æsthetically, also, the antiseptic method of treatment offers great advantages, since it prevents absolutely all pitting.

CITRON can be sliced and packed in jars, and, if quick cake or pudding is desired, the preparation of the citron will not prevent making it.

THE DRESSING-ROOMS OF THEATRES.—The dark, dirty, and unventilated condition of the dressing-rooms of many theatres—more especially the provincial ones—says a medical journal, has recently been the subject of complaint in a morning newspaper. There is reason to believe that the recent deaths from enteric fever of one or two actors touring in the provinces may not be unconnected with the insanitary condition of the rooms in which they "change" or "make up" before appearing on the stage. The direct connection of the waste-pipes from lavatory basins with drains or soil-pipes is often a ready means of laying on sewer air to these parts of the theatre, and the absence of any proper means of introducing fresh air, and the near proximity of water-closets in dark, unventilated corners help to intensify the evil. Already very much has been done for the comfort and safety of the audiences in theatres, and in London, under the stringent regulations of the County Council, even the oldest and worst-designed theatres will perforce become safe and commodious; but the companies—the actors and actresses—have been left to take care of themselves, and in all that pertains to their accommodation are practically at the mercy of the proprietors or management. It is no doubt often a matter of extreme difficulty, in the old style of theatres, to effect the structural alterations that will convert the dingy boxes of dressing-rooms into comfortable apartments, and the space at command for this purpose in the stage portion is usually very inadequate; still much could be done to improve unhealthy conditions by trapping and disconnecting waste-pipes, and by ventilating drains and soil-pipes. Some means can always be found to improve the drainage of such places, and the question of expense should not be allowed to stand in the way of removing a source of ill-health from the workers in a profession which is, under the most favourable circumstances, arduous and exhausting.

SPECIAL NOTICE.—The BEST STIMULANT for dietetic and other purposes is the "SKERRYVORE" (Registered) Blend of Fine Matured Scotch Whiskies, certified of the UTMOST PURITY by Mr. E. G. Clayton, F.C.S., Member of the Society of Public Analysts. Sold only by JOHN TWATT, 36, Argyle-place, EDINBURGH. Price 20s. per gallon, bottles and cases included.—[ADVT.]

Popular Science Papers

"Blessings on Science! When the Earth seemed old,
When Faith grew doting, and our reason cold,
'Twas she discovered that the world was young,
And taught a language to its lisping tongue."

—*Charles Mackay.*

ELECTRICAL INJURIES.

At a meeting of the Practitioners' Society, Charles L. Dana, A.M., M.D., of New York, read a paper on the above subject. As he pointed out, with the introduction of new industrial methods we are meeting accidents and injuries of all grades of severity; and in time there will be associated with electrical systems, classes of injuries some of which will be perhaps peculiar to them; some will resemble those known as railway brain and railway spine, traumatic hysteria, and other neuroses or psychoses; while a large number will be only of the ordinary surgical character.

The telegraph and telephone produce peculiar neuroses, due to the demand made upon the nervous system of the operator, the results being telegrapher's cramp, aural and mental disorders of telephone transmitters, &c. Most of the observed cases of this electrical injury come from the apparatus carrying electrical currents for lighting and power.

Such currents have varying effects. In some cases they merely stun the victim, and burn the parts in contact with the wire; in others they have been known to produce permanent paralytic effects (of such cases, however, there are only two on record); in still other instances almost instantaneous death results; while sometimes a mental shock is produced, which affects the system just as other shocks do.

The number of fatal accidents from electrical currents during the past ten years has been variously estimated at from 100 to 200.

The electrical current burns or not, according to the dryness of the skin and clothes, and the consequent degree of resistance. With a dry skin there is more burning, less penetration, less shock, and less danger of death. With a wet skin and good connections there is little burning and more serious internal effect. Dr. Biggs has noted that most of the fatal electrical accidents have occurred on or after rainy days.

Dr. William C. Thompson recently reported a curious case of hysteria. A man, aged fifty, not long ago saw an Italian killed by an electric wire. Two weeks later, while walking along the street, an electric wire which had just been cut fell, and struck his head. He grasped it in his hand, and fell down. He says that he knew nothing until a few hours later, when he found himself in the hospital. He then had right hemiplegia and hemianæsthesia, including the senses of smell and taste. There was limitation of the sight and hearing, bone deafness, and all the symptoms of typical hysteria. The wire which struck him was a "dead" one; and the blow was slight, and caused no contusion.

The fact is, that the practical introduction of electricity has been attended with much less fatality than that caused by gas, steam, railroads, and many other of the inventions of modern life. For example: in France, among 223,000 railway *employés*, there is an annual average of 239·5 killed, and 1,850·4 wounded; in Germany there are 1·35 per 1,000 of railway-servants killed, and 3·09 per 1,000 wounded; in England the annual mortality is 2·43 per cent; in the United States, among 418,957 *employés*, in 1880, there were 923 killed, and 3,617 injured—a higher rate than anywhere in Europe (United States Census). In coal-mining, the ratio in France is 1·56 per 1,000 of killed, 8·87 per 1,000 of wounded.

Some of the points which Dr. Dana wished to make in the article are, the extraordinary increase now going on in the practical application of electricity, there being already nearly 100,000,000 dols. invested in lights and power alone; a practically new class of injuries being met with in connection with the new industries. Such injuries have been heretofore produced only by lightning, and they have been consequently rare. These injuries are not numerous or serious as compared with those met with in connection with other great industries. There have been in ten years only about 100 deaths in the whole world from artificial electrical currents. The railroad kills annually over 2,500 people (2,541 in 1880), and injures about 6,000, in the United States alone. Electrical currents produce three kinds of severe accidents: they kill at once; or they burn severely; or, by the mental and physical shock, they cause traumatic neurosis. Usually if they burn severely they do not kill; hence, practically, the rule is, if contact with electrical wires does not kill, the victim gets only a burn or a harmless shock. In very rare cases the current seems to affect the nerves or nerve-centres, causing paralysis. The minimum current safe to receive is not definitely known. Probably 800 to 1,000 volts of continuous current, and a third less of alternating current, would not be fatal. The wires for lighting and for power carry the more dangerous currents.

WHAT IS BUHACH?

In an article on the California insecticide known as buhach the *Journal of the Society of Arts*, London, says this product is a fine powder made from the flowers of the *Pyrethrum cinerariæfolium*, largely used for the destruction of insects. This plant was originally a native of Persia, from whence it was introduced to Dalmatia and adjoining States of Herzegovina and Montenegro, where it has been almost exclusively cultivated until a few years ago. The importance of this industry was considered so great in these countries that special efforts were made to prevent the export of seeds and plants by the Governments. The plant was first introduced into California about twelve years ago by a Mr. Mileo, a native of Dalmatia, who succeeded, after some trouble, in obtaining seed from his country. After experimenting for some time, in order to find a suitable soil and climate, this gentleman finally succeeded in growing the plant on an extensive scale, and in 1880, associating himself with other capitalists, established the Buhach Producing and Manufacturing Company.

At the present time the company have about 300 acres of this plant under cultivation at their farm near Atwater, Cal., and own mills for grinding the dried flowers to powder at Stockton. The cultivation of pyrethrum requires careful and intelligent supervision, and it cannot be grown successfully without irrigation. It requires three years from the time of sowing to grow plants capable of producing a paying crop of flowers, and then they will bear from four to five years longer. It is at its prime, however, in its fourth or fifth year. The plant grows about thirty inches high, and is set out in rows four feet apart, and from fifteen to twenty-four inches apart in the rows. The flowers are harvested towards the latter part of May. The stalks are cut just above the roots, and the flowers stripped from them by passing the plants through a kind of comb.

The detached flowers fall into a box below, and are carried to the drying ground, where they are spread on sheets and exposed to the rays of the sun during the day, being repeatedly turned over in the meantime. They are covered during the night to prevent their absorbing moisture, as the perfect drying of the flowers is most important in order to retain the volatile oil which gives the powder its insecticide properties.

It is also very necessary that this operation should be done quickly, and that the flowers during the drying process should be protected from moisture. A slight dew falling upon the flowers at this time would injure their colour, and reduce their strength as an insect destroyer. In this respect the California-grown flowers are better cured, and consequently more valuable, than those of Dalmatia, it being acknowledged by experts that the particular conditions of soil and climate in California are extremely favourable to the growth and curing of plants rich in the essential oil which renders them so destructive to insect life. Like many other products, insect powders are liable to adulteration, and last year a large quantity made from the flowers of the Hungarian daisy, mixed with a small proportion of pyrethrum, was placed upon the market by unscrupulous dealers. Inferior powders are also manufactured from the stems and leaves of the plant, which possess, to a certain extent, the properties of buhach.

Stale cheese may be grated and dried, and is good and available in numerous dishes. The custom of serving grated cheese with apple and other fruit pies and puddings is a good one, which might be more commonly adopted.

Photography and Health.—The writer feels himself deeply indebted to photography for one highly important lesson in hygiene, that is, the relative value of out-door sunshine as compared with the diffused light of an ordinary room. Most persons would say that the outside light is two or three times as strong as that within our houses. But the ratio of difference is vastly greater. Carefully prepared tables show that for a view at the sea-shore, comprising sea and sky mainly (with a lens and plate of a certain speed), an exposure of one-tenth of a second is sufficient. An open landscape away from the sea would, with the same lens, the same aperture, and the same plate, require one-third of a second. A fairly lighted interior would require two and a half minutes, while a badly lighted interior—such as the rooms which most ladies prefer to occupy—would require half an hour to obtain an equally good picture. In other words, patients strolling on the sea-shore in sunny weather are in a light not two or three times, but eighteen thousand times stronger than that in the ordinary shaded and curtained rooms of a city house; and the same patients walking along the sunny side of a street are receiving more than 5,000 times as much of the health-giving influence of light as they would receive indoors in the usually heavily curtained rooms. No wonder such miracles are wrought by sending our sickly human house-plants to the country or mountains, or to the sea-shore, where the stronger sunlight, the purer air, and the invigorating salt water all combine to revivify the vital forces.

CHEMICAL ANALYSIS.—Dr. Drinkwater, Lecturer on Chemistry in the Edinburgh Medical School, undertakes the Analysis of Water, Foods, Wall-Papers, and of all other products and articles connected with Household Health and Commercial Interests. Terms on application to Dr. Drinkwater, Chemical Laboratory, 41, Chambers-street, Edinburgh.

Public Health

"Health is the first Wealth."—*Emerson*

DISPOSAL OF GARBAGE IN LONDON.

The interest which is being developed in this country in the destruction of garbage by cremation gives added value to the following description of the disposal of rubbish in London.

Somehow or other the rubbish both from the streets and the houses finds its way to the wharf. A considerable pile it makes. The seventy vans make on an average three and a half loads of about two yards each a day, and the year's total shows about 38,000 loads taken from premises, and 27,000 loads of sweepings from the streets. Averaging, then, 65,000 loads at a ton apiece, we have 65,000 tons of rubbish from within the city boundaries to be dealt with in a year. How is it disposed of? Let us go to the wharf and see. The chief object is the destructor—a furnace, or rather a set of ten furnaces—in which the rubbish is cremated after everything worth picking out has been removed. To look at it, says the *Leisure Hour*, a range of very dirty boiler fires, which are fed with fuel from the front and with rubbish from the top. The "cells" are back to back, over a dust-chamber ten feet four inches wide and six feet high, the flue from which leads to a thirty horse-power boiler, and to a chimney-shaft of 150 feet. Night and day the fire is kept up, from Sunday midnight to Saturday at half-past eight in the evening. During the year over 19,000 loads of refuse are shot into it, and these produce a residuum of some 4,000 loads of ashes and cinders more or less hard, not only valueless, but for the removal of which money has to be paid—of which difficulty we shall have more to say presently. The men work the destructor in three shifts of eight hours, there being three men on the top to feed the furnaces, and three below firing and removing the clinkers and ashes.

We mount to the top of the furnaces with the superintendent, and stepping gingerly behind him on a very warm layer of odds and ends, and carefully avoiding sundry small sloping gullies leading down to the fires, we stand in safety on an iron platform. Overhead runs a travelling-crane, behind us is the engine-house, in front of us is the space on which men loaded with big baskets are throwing down, one after another in constant succession, almost every variety of dry unsaleable refuse. As the heaps fall they are attacked by the three men with long pokers or peels, and pushed down the sloping gullies into the fire. They are dealing with the refuse in retail; we are to see it treated in wholesale.

A van drives in to our right, and takes up its position under the crane. Its contents are known—nothing worth troubling about in that lot. The claws of the crane sink threateningly on to it. There is a loosening of bolts and springs in the body of the van. Down go the crane-claws and clutch hold of it. The chains tighten. Slowly and resistlessly the body of the van is lifted up from the frame-work, and hung in the air. Higher, higher it comes, until it is above our heads. Then the vertical movement becomes a horizontal one. Slowly along the double rails the crane and its burden travel toward the gullies of the fire. It stops. There is a clanking of chains, a rattle, a jingle and a roar, and the stuff is shot in an avalanche before the men, and rammed out of sight to pass through the furnace. The empty van body slips back to its level, glides horizontally to the rail end, sinks

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on to the framework, with a slide and a click the whole thing is a dust-cart again, and away it drives for another load to bring to destruction in the same way.

Every morning there comes a van from a hospital, into whose contents no man pries. It is brought under the crane and lifted aloft, and run over the fire, but its doors fall open only as it touches the gully, and no one sees what it has brought to be destroyed. Often a less horrible cartload comes with diseased meat, or other condemned food, to be lifted by the crane and similarly converted into ashes or clinkers. The dividing of the body of the van from the frame-work has many advantages. There is no advantage in any excessive stock of wheels. The frames do double duty. The van bodies are replaceable by water-tanks. Slide off the body and slip on the tank, and there is a water-cart complete—a capital arrangement, for when there is most need of dust-vans there is no need for water-carts. The load we have seen dealt with was one of hopeless rubbish. Let us inquire into the fate of a more mixed accumulation now entering the yard. Along the yard side is a row of heaps, over each of which a gang of pickers are busy. In one place the centre heap has disappeared, sorted out into smaller heaps, or carried off to the destructor opposite. The van is backed into the vacant space, and the contents deposited on the ground. A gang sets to work on it, consisting of three women and a man, for the women, though surely disappearing, have not yet died out, even in the City yard.

The "leading woman" is in charge; next to her is the man who is known as "the filler." The woman works by contract at so much a load, and the members of the gang earn from twelve shillings to seventeen shillings a week apiece. The fuel is here their perquisite. They sort out the paper, the string, the bones, the tins, the oyster-shells; and speaking generally, their performances are more curious than pleasant, and one is not very sorrowful to hear that the profit on what they do is so near extinction that in a few years their trade will be unknown. Women smoking short pipes and wearing strawboard gaiters and torn bonnet-boxes for pinafores are perhaps worth seeing by students of so-called "life," but the fewer we have of them the better. A strange notion this of hereditary pickers; mother to daughter, mother to daughter, going on the heap generation after generation—a caste or class by themselves, a profession indeed quite exclusive, and a special inheritance of the spindle side. The paper and pasteboard, bundled up into trusses about as large as a bolting of straw, are loaded into barges and sent to Germany to be made into such paper as no English manufacturer can make a profit out of. The string goes to the mat-makers, the bones to the glue-makers, the tins and cans and old buckets and rusty saucepans are taken—when some one can be beguiled into taking them—to be melted down for the sake of the solder which is the most valuable thing they have about them. The oystershells go to the three mortar-mills worked from the destructor's boiler and are ground up into manure. That nothing is wasted may be true, but unfortunately the utilization of such waste as this has an arch enemy in sanitary science, and the dust-heap is no longer the gold mine it used to be.

The amount of organization necessary to gather the rubbish to one centre is apparent as we visit the pleasanter portions of the yard. The stables for the horses—splendid animals these horses, costing eighty pounds apiece, and having a life expectation of only eight years; the shops for the farriers and wheelwrights, who do all the repairs on the premises; the fodder-loft, with its mixing elevator; the stores with the spare tools; the park of vehicles ready for emergencies—all witness to the work required behind the scenes to make matters move smoothly. And among other excellent arrangements there is a large room with a kitchen attached for the men's use. In this room the men assemble in the morning to have hot coffee before they start on their rounds, the coffee being found at the city's expense, though the men are encouraged to contribute sixpence a week toward a sick and self-help fund as a trifle of acknowledgment, the fund being administered without deductions. And in this room every man has a locker, in which we suppose he keeps his "plated harness" ready for his "going into black" in the morning.

At the river front is a fleet of barges which come to the neighbouring wharfs loaded with bricks, and return from here with the bulk of the refuse, bound for the Medway. The street-sweepings go away direct, and with them such of the wet stuff—the "soft core," so called—as is available for manure. Some barges will load up entirely with this; others will load with "dry core," half ashes for the bricks and half "breeze" to burn them by. Seven barges at a time can be loaded, and three barges a day can be despatched full from each berth, so that as a barge-load averages seventy tons, the facilities for getting rid of the rubbish are equal to any pressure. The difficulty is to make sufficient profit out of it to pay for the removal. Year by year the prices fall, and what at one time the contractor was glad to buy he has now to be paid to take away. It costs over £30,000 a year to keep the city clean, and not a tenth of this comes back by the sale of the sweepings and refuse.

GERMS IN MILK AND ITS PRODUCTS.

DURING the past year investigations on the bacteria of milk have been carried on in the laboratory of Storr's School Agricultural Experiment Station, under the direction of H. W. Conn, professor of biology in Wesleyan University, and we deem the subject of sufficient importance to call attention to some of the more interesting results, which have already been published in the bulletin of the station for July.

It has been found that milk is a medium in which bacteria or germs grow with the greatest readiness. Some thirty or forty species were found floating in the air in the vicinity of the station. All of these were to be found in cream. Although they grew readily in milk, yet cream seemed to be a better medium; probably because it kept longer without putrifying, and thus allowed some of the slower-growing species time to develop. Butter is not so good, apparently from a deficiency of albuminous matter. The sweetest butter always contains some bacteria; when they become numerous, the butter becomes tainted.

Milk when first drawn from a healthy cow is free from bacteria; but the short exposure to the air in the act of milking is sufficient to contaminate it. Of eight sterilized tubes having milk drawn directly into them from a carefully washed teat by clean hands, and each tube then plugged with sterile cotton, seven became sour within a few days, and were found to contain many bacteria. The eighth remained sweet for a long time, yet it eventually also changed. Ordinarily, however, the number of bacteria in the air is of little importance compared to those from unclean vessels, which are the great source of infection. In ripened cream each drop has been found to contain from 10,000 to 100,000 bacteria (more of the larger number) and of about thirty species.

Two or three of the species usually found in milk are characteristic. Of these, one—the bacillus acidi lactiti—produces the ordinary souring of milk. Another—the oidium lactis—grows rapidly, yet seems to produce no important change in the milk. The first is always found to be very abundant in the air in warm weather, but at times during a cold winter it is almost absent. Then milk could be exposed in a perfectly clean vessel to the open air for two weeks without going through the characteristic change of souring, yet it would finally curdle, with a peculiar odour of decay.

Considered as to their mode of action, four different classes of bacteria were met in milk. Some induced, at ordinary temperature, the change commonly known as souring. Some others would grow rapidly at such a temperature, but would produce like results only at some higher temperatures. Others would not decompose the milk sugar with the formation of acids and curds at all, but would leave the milk fluid, and sometimes decidedly alkaline; still others, though making curds, would produce no acid, but make the milk alkaline instead. The large number of the species, however, produce both acid and curds at some temperature. The manner of curdling was found to differ greatly. In some cases a hard curd with a clear whey is formed; in others the curd has no clear whey separated from it, while in other cases the the whole milk is turned into a semi-gelatinous mass. With some bacteria the curd is easily broken or cracked, while with others it is very tenacious, sticky, and slimy. Sometimes the curd was dissolved in a few days, the milk becoming a clear, transparent fluid. In these instances the curd seemed to undergo a change similar to digestion, that is, conversion into peptones.

A characteristic odour was also given off, which differed widely with the varying species of bacteria, smelling like sour bread, soft soap, salt mackerel, pigs, or a barnyard, and often of putrefaction.

In so-called ripened cream, bacteria in almost inconceivable abundance are always to be fonnd. The more important results of the process in the cream are the souring, the decomposition of the albuminous matter present, and the development of the desirable flavour. The decomposition of the entangling fibrin liberates the fat globules, whereby their collection together by churning is greatly faciliated. A butter made from such a cream may keep the longer, in that it is more free from the albuminous matter necessary for the growth of bacteria, although it would contain a greater number than a sweet-cream butter would in the beginning.

The use of sal-soda in washing and of "live steam" in the after drying of milk-vessels are of great practical importance, in that the former can thoroughly remove both the fat and curds left from the milk, while the latter will effectually sterilize anything which may be left.

FIFTH EDITION.—NOW READY.—GREATLY ENLARGED, AND COMPLETELY REVISED.

"A Book every Young Man should read."

"A LECTURE TO YOUNG MEN on Purity of Life and the Preservation of Health." By A GRADUATE. Price ONE SHILLING, or post-free, 1s. 1d., from HENRY RENSHAW, Medical Publisher, 356, Strand, London, W.C.

This pamphlet, now being issued in its FIFTH EDITION, forms a complete refutation of quackery of all kinds, and is a safe and reliable guide, from the medical standpoint, to all young men. EVERY YOUTH should read this pamphlet as a guide to the safe conduct of life in a moral and physical sense. Full directions for the treatment of "Nervous Debility" so-called, and allied ailments, are also given. Thousands of sufferers have welcomed this pamphlet as a veritable beacon-light to health and purity of life.

Jottings from the Journals

"Th' ingredients of health and long life are
Great temperance, open air,
Easy labour, little care."—*Sir Philip Sydney.*

Fans or Hot Water.—The entire absence of sanitary arrangements in Chinese towns and villages being well-known, it goes without saying that the laws of hygiene are utterly and entirely neglected. There is no isolation of infectious diseases, and no attention is paid to causes of death unless there is supposition of violence. According to our ideas, therefore, Chinese cities ought to be hotbeds of disease, subjected regularly to those terrible epidemics which, with us, are invariably associated with the neglect of sanitary laws. Strange to say, such is not the case. Epidemics come and go without any apparent reason, appearing, perhaps, suddenly, causing a heavy mortality for a short time, and then as suddenly disappearing again, thus affording an endless field of speculation to the foreign *savant*. But, speaking generally, Chinese towns enjoy an immunity from these dangerous outbreaks almost as complete as that of well-drained European communities, and the cause of this puzzling and curious phenomenon has been variously explained. The fact is all the more striking when taken in connection with the contaminated water-supplies of Chinese towns, the effect of which on Europeans has been manifested over and over again in the heavy mortality which overtook them previous to the adoption of precautions enjoined by modern sanitary science. The healthiness of Chinese cities has been ingenicusly attributed by some people to the universal habit of fanning, a practice which is said to keep the atmosphere in constant circulation. How far this explanation can be deemed to suffice we must leave to experts to decide, but, so far as a contaminated water-supply is concerned, we believe the real secret of immunity from its evil effects to lie in the universal custom of boiling all water intended for drinking. As a matter of fact, the Chinese never drink cold water. The national beverage, which, in a true sense, may be said to cheer but not inebriate, is tea, and this is always "on tap," even in the houses of the very poor. The native aversion to cold water is undoubtedly carried to extremes, and certainly induces diseases which might easily be avoided by a judicious system of outward application. In the matter of ablutions it must, however, be admitted that the Chinese enjoy facilities which, however little they are taken advantage of, are far in advance of anything within the reach of the poorer classes of our own favoured land. Every little hamlet in China has a shop where hot water can be bought for a trifling sum at any hour of the day or night. Even in a small fishing village on a remote island in the Gulf of Pechili, where the writer spent six weeks under very unpleasant circumstances during a severe winter, this was the case, and a great convenience it proved.—*The National Review.*

Oxygen Inhalation.—The opinions held among medical men concerning the therapeutic value of inhalations of pure oxygen are so various that any careful observations upon the subject are worthy of attention. In the *Practitioner* (August, 1889) Dr. Thompson discusses the subject from a theoretical point of view, and gives also the result of experiments upon animals and of observations upon patients. From experiment, and from consideration of the laws of physics as they bear upon the absorb-

tion of oxygen by the blood, it is quite evident, that, if an animal in a state of perfect health is made to breathe pure oxygen at the pressure under which this gas exists in the atmosphere, but very little more oxygen will be taken into the blood than if it breathed common air. In order to make any considerable amount enter the blood above that which is usually absorbed by it, a degree of pressure is necessary which causes mechanical interference with circulation and respiration. The old idea that animals cannot live in an atmosphere of pure oxygen is erroneous. As might be expected from the foregoing statements, it is now proven that animals can live for many hours in pure oxygen, under ordinary atmospheric pressure, without any symptoms or appreciable change, provided the CO_2 exhaled and the nitrogenous waste products of the body be removed. The vague and inconstant sensations, experienced by healthy persons who inhale pure oxygen freely, may be due to impurities contained in it. Practically, Dr. Thompson, as we learn from a summary in the *Medical News*, has found the inhalation of oxygen valuable in many cases. In anæmia and chlorosis he has derived no decided benefit from it. In malignant diphtheria with rapid respiration, subjective dyspnœa, and cyanosis, relief was afforded only to the subjective dyspnœa, the cyanosis remaining the same, and the patient dying from pulmonary œdema and heart-failure. In a case of illumination-gas poisoning, with persistent unconsciousness and subsequent pneumonia, the continuous inhalation of oxygen had no effect whatever, either upon the breathing or upon the cyanosis which occurred during several attacks of pulmonary œdema. In a case of malignant endocarditis, with extensive valvular disease and dilatation, oxygen failed to relieve the dyspnœa, either before or after obstruction occurred in the lungs. In pneumonia, with rapid breathing, dyspnœa, and cyanosis, he has often found oxygen of very great value. The dyspnœa may diminish, while the cyanosis quickly vanishes, and the respiration becomes slower and more natural. So also in capillary bronchitis and asthma, especially when it is accompanied by much bronchial secretion. In uræmic dyspnœa he has found it of great use. In one such case, with normal lungs and very intense dyspnœa, lasting for three days, each inhalation of oxygen was followed in fifteen minutes by slowing and quieting of the breathing, slight improvement in the cyanosis, and great increase of comfort to the patient. Upon stopping the inhalation, the dyspnœa always returned. A bibliography of the subject is appended to the article.

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Table-Ware and Napery for Children.—It will be found a real help, besides being a pleasure for the little ones, to provide a special cup, plate, spoon, and so on for each child. Lovely bread and milk sets, consisting of plate, bowl, and pitcher, can now be bought for two dollars, and those who are fortunate enough to have an artist friend proficient in the art of china painting can easily obtain such a set with original designs. Plates with the alphabet, or perhaps illustrating some fairy story, or maybe a geography lesson in the form of a map of the State in which the child lives, or some historical event pictured so as to tell a story; indeed, there are a thousand subjects for such a purpose. If you have no artist friend, cannot do it yourself, and know of no one who can, it would not be much of a task to get from some art store or paper the address of some good china-decorator. If you wish to have a certain subject pictured, suggest to the artist to begin with the first scene on the plate, continue the story on the bowl, and finish it on the pitcher. My first Bible lesson was learnt from my porridge-plate, on which there was a series of rude pictures illustrating the life of Joseph. Children's silver-ware is very elaborate now, but plain, not too heavy silver, is preferable. The bread and milk spoon is a little larger and flatter than an ordinary teaspoon, and has rather blunt edges, so as not to cut the child's mouth. The knife and fork are, of course, small, while the push-fork intended for small children to use in place of their fingers to push the food into a spoon is admirably suited to this purpose. It is simply a bar of twisted or plain silver about five inches long with a little cross-bar at one end. Some children are made to use a crust of bread for a push-fork, which is certainly better than the fingers. As soon as a child can use a napkin it should have its napkin-ring, and be taught to fold and put the napkin in it. And no one can object to a silver mug or cup. Ornamented bibs are almost too universally used to need mentioning, but there is one thing that should be carefully attended to, and that is to see that they are always clean—one for each meal if necessary. If you put a soiled bib on a child, it will make most certainly an unpleasant impression, not only on the child, but on those present, and the child will be very much less apt to be careful. Children's napkins are, of course, smaller and need not be so fine as those for the table. Do not permit a soiled napkin any more than a soiled bib to be given to a child. Many will say that is nonsense, but those who ought to know say that clean table-linen, as well as clean clothes, will make a difference in the behaviour of any child. Often it is necessary to place a napkin or cloth under the plate to protect the tablecloth from stray bits of food. These are best plain, without embroidery or fringe of any kind. A crying child, a sulky child, a noisy child, or a dirty child is not to be endured at table at all, and no parent should want such. But a neat, well-behaved child is always a pleasant addition, and there are few men or women who are not willing to add the word of praise to such an addition. But there is one thing to remember, children cannot always act *just so*—not even their parents do—and great but judicious allowance should be made for them. Often when they are irritable and unmanageable it is because they are sick and quite unable to control themselves. It is then best that they should be removed at once, before they have an opportunity of being disobedient. And they should also be taught to be as polite to one another as to other people.—*Good Housekeeping*.

A Household Man-Trap.—It would be somewhat difficult, says the *Lancet*, to design a simpler or more perfect means of inflicting most serious injury on the casual passer-by than the ordinary unfastened coal-plate, with which we are all familiar. Laid over an opening sufficiently wide to admit the foot, placed in the very middle of the pavement at our doors, too often not properly secured, and liable to be moved by any chance of accident or childish mischief, its mere description is enough to picture the miseries of aggravated fracture. Happy the man who, stepping in fog or darkness within its treacherous edge, escapes with less than this degree of hurt. It is needless to rely on householders to prevent the occurrence of accidents due to this cause. In spite of all ordinary care they are themselves as liable as any to suffer on the very threshold of their homes. The fault is not theirs alone or even chiefly. It is in the primary thoughtlessness which allowed the use of so dangerous a convenience, and it is a matter as much for municipal as for private inspection and amendment.

IMPORTANT ANNOUNCEMENT.

A NEW VOLUME BEGAN WITH THE NUMBER FOR FRIDAY, OCTOBER 4th, 1889.

BONUSES TO SUBSCRIBERS TO "HEALTH."

HEALTH, as our readers are aware, may be obtained of all Booksellers and Newsagents, and at the Railway Bookstalls, on the day of publication. It may also be ordered from the PUBLISHER, 2, Paternoster-square, London, E.C., who will send the journal, post free, for a year, on receipt of postal orders for 10s. 10d.

As many of our readers who live in remote districts prefer to obtain HEALTH from the Publisher direct, and as we are desirous of increasing the already large number of subscribers who give us a yearly order for the journal, we offer the following FREE GIFTS and BONUSES to all who subscribe to HEALTH for one year or longer:—

(1.) To each Subscriber who remits 10s. 10d. to the Publisher, entitling him (or her) to receive one copy of HEALTH, post free, for one year, we shall present a copy of Dr. Andrew Wilson's work, entitled "A Manual of Health Science" (Longmans & Co.), value 2s. 6d.

(2.) To each subscriber who remits 21s. 8d., entitling him or her to receive two copies of HEALTH weekly, post free, for one year (or one copy for two years), we will present Dr. Richardson's "Ministry of Health" (Chatto & Windus), value 6s. The copies of HEALTH so ordered may be posted to separate addresses.

(3.) To each person who subscribes 32s. 6d., for three copies of HEALTH, post free, weekly, for one year, we will present the volume by Dr. Richardson mentioned above, and also the handsome, illustrated book entitled, "Studies in Life and Sense," by Dr. Andrew Wilson (Chatto & Windus), value 6s.—being a free gift of the total value of 12s.

The bonus last mentioned will also be presented to anyone who succeeds in obtaining three yearly subscribers to HEALTH, and who remits to the Publisher the sum of 32s. 6d., together with the names and addresses of the persons to whom the copies are to be posted each week.

As the literary gifts above-mentioned constitute books containing solid and reliable information regarding health and other matters of popular scientific interest, it will be seen that the above scheme, while intended to increase our already large circulation, also offers distinct advantages to new subscribers who guarantee by their subscriptions a year's support to this journal. All communications regarding subscriptions and other purely business details connected with HEALTH should be addressed directly to the PUBLISHER, 2, Paternoster-square, London, E.C., and *not to the Editor*.

GERM-EXPECTORATION STATISTICALLY STUDIED.—Böllinger has shown the curious fact that a cubic centimètre of consumptive sputum contains from eight hundred and ten thousand to nine hundred and sixty thousand tubercle bacilli, or germs. In other words, in an ordinary copious expectoration the consumptive deposits nearly a million bacilli in his cup, and in an ordinary day he throws thirty or forty millions of the micro-organisms out upon the cold world. At a low estimate, the ten thousand tuberculous patients in New York city daily expectorate some 300,000,000,000 bacilli! The yearly number would be—but the imagination fails to follow such statistics. It takes at least eight hundred of the microbes, however, to start up tuberculosis even in a guinea-pig.

READING IN BED.—Some credit is doubtless due to those who, in despair of a cure for sleeplessness, have sought to palliate the mischief done to health by reading in bed in order to procure sleep. Their position is at best that of mere necessitarians. The advice they offer may, however, have some value for those who from some cause are physically unable to fall asleep within a reasonable time, and who will insist on reading till they do. It includes various measures intended to prevent or diminish the ocular strain thus incurred. Bathing the eyes with weak salt solution, the adoption of a sitting posture, and the use of sufficiently bright light are among the means advised. They ought certainly to check the bad effects of an unhealthy practice. We should have more sympathy, however, with any attempt to deal with the true source of mischief—the habit itself. This is in a large majority of cases unjustified by any real necessity. Whatever the cause of sleeplessness, whether an idle preceding day, a midday or evening nap, an empty stomach or an over-full one, fatigue or worry, the truest wisdom consists in removing this by the needful change of custom. All rules of treatment, such as those above stated, maintain the reading habit while they moderate its consequences. This is our one objection to them. If sleep requires to be wooed, it should be remembered that there are available, besides the treatment of causal conditions, various direct methods of diverting the mind from the outer world, and thus of inducing sleep. The use of one or other of these is, from their nature, more rational than the practice of reading in bed.

Our Letter-Box

"Conference [maketh] a ready man."—*Bacon.*

NOTICES TO CORRESPONDENTS.

All Communications for the Editorial Department (including Books for Review, Specimens of Sanitary Appliances, &c.), to be addressed to "THE EDITOR OF HEALTH," 2, PATERNOSTER-SQUARE, LONDON, E.C. *Those intended for the Publishing Office to be sent to* MR. A. P. WATT, THE PUBLISHER, *at the same address.*

RULES FOR CORRESPONDENTS.

OWING to the mass of letters which reaches us each week, we respectfully direct the attention of Correspondents, desiring replies in the LETTER-BOX DEPARTMENT of HEALTH, to the following rules:—

1. **All questions are answered free of charge in the columns of HEALTH. A limited space only, is available for the insertion of replies each week.**
2. **All letters must be legibly addressed to "The Editor of HEALTH, 2, Paternoster-square, London, E.C.," *and to no other address.***
3. **Questions to which answers are desired by post, are so replied to solely at the Editor's discretion. If no answer is sent by post, the query will be replied to in the "Letter-Box" columns of HEALTH. A stamped addressed envelope must accompany all queries to which a private reply is desired.**
4. **Addresses of physicians and surgeons will, as heretofore, be forwarded FREE to Correspondents on their enclosing a stamped addressed envelope for reply.**
5. **Correspondents are requested to write on one side of the paper only, and to make their inquiries as brief as may be consistent with clearness.**
6. **From the necessity of sending HEALTH to press early in the week, no Correspondent can be replied to in the "Letter-Box" columns in the same week in which the inquiry is received. Replies crushed out of any issue will be found in the succeeding number.**
7. **No Post Cards must be used in sending queries. Violation of this rule deprives the sender of the privilege of a reply.**

QUERIES AND ANSWERS.

REPLIES: GENERAL, SANITARY, AND MEDICAL

[Readers of HEALTH will kindly note that when back numbers of the journal are desired, the letters containing such requests and stamps for the numbers should be addressed to the PUBLISHER of HEALTH, 2, Paternoster-square, London, E.C., and *not to the Editor*.]

Owing to the necessity for our going to press early in the week on account of the Christmas vacation, several replies are held over. These delayed answers will be duly inserted in next week's issue.

B. AMOT.—Give up the tonic for a time, and take twenty or thirty drops of the Cascara Cordial, or two of Burroughs' Cascara Tabloids, twice daily, between your meals. Eat whole-meal bread, stewed fruits, and vegetables, and avoid tea and coffee. Substitute for tea, morning and night, Grant's Scotch Oat Flour.

A. STANLEY.—Keep the hair very short for a time; wash the head once weekly with Vinolia Soap and tepid water, and use the following lotion: Bay rum and glycerine, of each two drachms; tincture of cantharides and tincture of capsicum, of each one drachm; sulphate of quinine, ten grains; and water, four ounces. Mix. A little of this lotion to be rubbed well into the roots of the hair each morning.

B. A.—Occupy your mind with healthy thoughts, and take plenty of out-door exercise. Try cycling, or join a gymnastic club, and by indulging in healthy exercise you will overcome your present symptoms. If you otherwise indulge your desires, you will assuredly suffer bitterly in the future.

A. S. E.—Try the following mixture: Carbonate of ammonia, one drachm; bicarbonate of potass, a drachm and a half; infusion of chiretta, six ounces. Mix. A tablespoonful, thrice daily, before food.

SANDY.—For the falling hair, use the following lotion: Solution of ammonia, half an ounce; tincture of cantharides, half an ounce; eau de Cologne, one ounce; water, to eight ounces. Mix. Rub into the roots morning and night with a soft sponge or piece of lint.

ONYX. — In Marsh's test for arsenic there is employed the apparatus for producing hydrogen gas by the action of sulphuric acid on zinc. The paper or other object to be tested is placed in this vessel, and the hydrogen given off is burnt, a clean porcelain plate being used to receive the flame. If arsenic is present, it is deposited on the porcelain.

SEAFORTH.—A lotion for blackheads is made by mixing three drachms of sulphur, four drachms of glycerine, and four ounces of rectified spirit. This should be rubbed into the skin at night.

S. GRAHAM.—We have no faith in any such treatment as that you name. If you send us stamped addressed envelope, we will send you name of a specialist.

ESTELLE.—Try the following: Carbonate of bismuth, ten grains; wood charcoal, ten grains; bicarbonate of soda, five grains. Mix. One such powder to be taken thrice daily, half an hour before meals, when you are troubled with acidity.

K. PETERS.—If acidity is present, you may try the following: Subnitrate of bismuth, six grains; carbonate of magnesia, ten grains; powdered gum arabic, twenty grains. Mix to form a powder. Stir in a cup of boiled milk, and, when cool, stir up again before being swallowed To be taken twice daily, after food.

FORTH.—Give up the tonic for a time, and take twenty or thirty drops of the Cascara Cordial, or two Cascara Tabloids, twice daily, between your meals. Eat whole-meal bread, stewed fruits, and vegetables, and avoid tea and coffee. Substitute for tea, morning and night, Scott's Midlothian Oat Flour.

NOTA. — Try a vegetable dietary—stewed fruits, apples or oranges, &c., and whole-meal bread, with Scott's Oat Flour for supper and breakfast; avoid tea and coffee; take Cascara Cordial, twenty drops in water (or two Tabloids), between meals, once or twice daily. Sponge with cold water each morning; sleep on a hard mattress; take plenty of open-air exercise, and avoid fluids and suppers late at night.

SOL-FAIST.—Take the following, and adopt a light diet: Bicarbonate of soda, two drachms; dilute hydrocyanic acid, twelve minims; compound infusion of gentian, to eight ounces. Mix. Take a tablespoonful twice daily, an hour before meals.

J. A. OLDHAM. — Try the following ointment: Hydrarg. ammoniat., ten grains; Bismuth. subnit., one drachm; liq. carbonis deterg., one drachm; lanolin, six drachms. Mix. To be applied night and morning.

BRIM.—Erasmus Wilson's Hair Wash consists of eau de Cologne, two ounces; tincture of cantharides, two drachms; oil of rosemary and oil of lavender, of each ten drops. Another stimulating hair wash is: Glycerine, two ounces; tincture of myrrh, one ounce; eau de Cologne, one ounce; tincture of cantharides, half an ounce; and distilled water, twenty-four ounces.

LECTOR.—A gargle for relaxed throat is made by adding to two and a half drachms of alum an ounce of honey and a pint of rose-water. About a tablespoonful should be taken into the mouth at once, and repeated four times on each occasion; the gargle to be so used thrice daily.

A. A.—Himrod's Asthma Cure, which is used by inhaling the vapour arising from the substance when burned, should be tried by you. Savar's Cubeb Cigarettes, used by bringing the smoke down the nostrils, are also useful.

S. F. G.—To cure a case of small worms, look to your food; avoid all uncooked vegetables and fruits; exercise the utmost cleanliness of person, and use an injection of infusion of quassia, or one made by adding half an ounce of the tincture of the perchloride of iron to a pint of water.

GRACE.—Take the following mixture for a week or so at a time, and then allow an interval of a week before resuming. This treatment to be carried out for some months, at least: Iodide of potass, two drachms; infusion of calumba, six ounces. A dessertspoonful to be taken thrice daily. The mouth may be gargled with chlorate of potash (or a chlorate of potash lozenge be allowed to dissolve in the mouth) when symptoms appear there.

PRINCE. — Use the Pommade Trichophile of the French Hygienic Society, 6, Conduit-street, Regent-street, London, W. (advertised in our pages); it is an excellent remedy for scurf. Wash the hair once a week with Bayley's Soap.

L. E.—Take the following mixture: Chloride of ammonium, two drachms; spirits of chloroform, one drachm; simple syrup, three drachms; water, to make up six ounces. A tablespoonful to be taken in water every four hours.

JOE TATE.—You should try the effect of Stern's Pumiline Liniment rubbed into the parts at bedtime each night, regularly. Internally, take the following mixture: Iodide of potash, one drachm; aromatic spirits of ammonia, three drachms; syrup of ginger, half an ounce; water, to make up six ounces. Label: "A tablespoonful in water, twice daily, before meals." Write again, if not cured.

A. BRADY.—Take the following: Citrate of iron and ammonia, one drachm; syrup of orange-peel, half an ounce; water, eight ounces. Mix. Label: "Two tablespoonfuls to be taken thrice daily, before food."

F. P.—Try the following cooling lotion: Goulard's Extract, half a drachm; spirits of wine, two drachms; water, eight ounces. Mix. Apply this to the boil constantly on lint.

R. S. A.—The following mixture might be tried: Carbonate of ammonia, one drachm; bicarbonate of potass, a drachm and a half; infusion of chiretta, six ounces. A tablespoonful thrice daily before food.

M. E.—Read the pamphlet, "A Lecture to Young Men" (post free, for 1s. 1d., from Mr. Renshaw, 356, Strand, London, W.C.), and follow out the directions given therein.

DONA.—Apply to the French Hygienic Society, 6, Conduit-street, W., and they will probably be able to supply you with a harmless hair dye such as you require.

ALEXANDER S.—Read the pamphlet, "A Lecture to Young Men" (post free, for 1s. 1d., from Mr. Renshaw, 356, Strand, London, W.C.), and follow out the treatment regarding tonics, cold or tepid sponging, &c., which is given therein.

POOR FEET.—You should wear very large and roomy boots, and cover the bunion with soap plaster spread on kid or wash-leather. A good lotion is that made by adding two drachms tincture of arnica to eight ounces of water. This lotion is to be applied on lint, covered with oiled silk to prevent the lotion from evaporating, and should be continued for two or three days at a time. The tincture of veratrum viride painted on a bunion, if inflamed, may also do much good.

W. B. S.—As you remark, the quack's idea is to frighten his dupes into consulting him, and it is evident in your case that he might have succeeded had you not been better advised.

WERNER.—You are needlessly exciting yourself, and probably are simply overworked at your business. We advise you to think less about your ideal ailments and attend to your digestion. Follow out the diet-rules laid down in the pamphlet you have read, and take a tepid sponge bath each morning. It is probable that a teaspoonful of Inman's Syrup of the Hypophosphites taken after meals, thrice daily, in a wineglass of water, will do you good, as a general tonic. We warn you, however, that until you give up your habit of brooding over yourself and your fancied troubles, you will not regain your tone.

ASA MERITT.—1. About 20 per cent. 2. Give Fer Bravais in twenty-drop doses, after food, thrice daily. 3. Permanganate of potash is the substance.

STELLA.—The books you name are only given to subscribers who forward to the Publisher direct a yearly subscription (10s. 10d.) entitling them to receive HEALTH post free for one year. Read the notice, and you will see the conditions do not apply to those who subscribe weekly; although we appreciate highly, of course, the patronage of those who purchase this journal direct from their newsagents.

E. A. Q.—What you suffer from is merely a severe form of indigestion, probably accompanied by biliousness. Read the advice given to "G. Simpson" in last week's HEALTH, and note what is there said regarding diet and the use of Cascara. If flatulence troubles you, take five drops of Pure Terebene on a piece of sugar, and limit your vegetable foods for a time. Rest after your meals. The pill ordered to "Alex. F." in last number will also do you good if taken before your attack comes on.

CHRISTMAS.—One of the most notorious quacks in London. If you wish to be swindled, by all means consult him. Pulvermacher's Belt (194, Regent-street, London, W.) is a genuine appliance. Read the pamphlet, "A Lecture to Young Men" (post free, for 1s. 1d., from Mr. Renshaw, 356, Strand, London, W.C.), and you will probably be saved from quacks and their tender mercies by a perusal of its pages.

READER.—[Use a more distinctive name in future.] Read the pamphlet recommended above to "Christmas," and you will find full information in its pages.

C. BLANCHARD.—You should use the Chloride of Ammonium in a Burroughs' Inhaler, and get the neutral vapour in this way. Your irritation will probably give way to the friction of your chest night and morning with Stern's Pumiline Liniment (the Pumiline Essence may be used in an ordinary inhaler at bedtime with good effect), while internally you should take a teaspoonful of the following in water when the irritation is present: Chlorodyne. (Collis Browne's), ipecacuanha wine, and syrup of squills, of each, one drachm; glycerine, to make up two ounces. Mix, and label as above directed.

BANKER.—See advice given to "B. G. M." in last week's HEALTH. Keep your hair short for a time, and wash it once a week with Bayley's Spermaceti Soap (17, Cockspur-street, London, W.) and tepid water. Avoid small combs and hard brushes.

POMONA.—You need not be in the least alarmed. What you name only shows that you are in good health, and that you are subject to no undue excitement. Take no heed of the condition you mention.

B. C. M. A.—1. A truss (such as that made by the Medical Battery Co., 52, Oxford-street, W.) should be worn by you. 2. Only a medical examination can settle the point you name. 3. Stern's Pumiline preparations.

A. GEABE.—1. See advice given to "B. C. M. A." above. 2. Use Stern's Pumiline Liniment night and morning as a suitable application. 3. We recommend you to clothe warmly in the Hygienic Woollen Clothing made by Forsyth, 17, Renfield-street, Glasgow (advertised in our pages), so as to avoid all risk of colds and chills on the principle that prevention is better than cure.

A MOTHER.—Feed your child on Mellin's Food only. That you have been using is evidently starchy in nature, and, as such, is unfitted for the infant.

RUFUS.—1. We should say it would do no harm in such a case. 2. Not, as far as we know. It can only be given on sugar; but you might try mixing it with milk; or try it plain, by putting the dose in a teaspoon, and then placing it on the tongue directly.

AMBROSE.—Give fifteen drops of Fer Bravais in water, thrice daily, after food. As you are near the sea, we advise you to use salt water as an injection (in a tepid form), morning and night.

B. F.—1. Use Allcock's Corn Shield (as advertised in our pages) as a remedy. It is an excellent and handy remedy. 2. Beecham's Pills will do good in the case you name.

ABLE WHITE.—We advise you to give Dee Oil (to be had from all chemists) a trial in your skin-disease. See a "Note" on this topic in the present number. It is a safe and simple remedy in all skin-ailments.

Tired Brain

Horsford's Acid Phosphate,

A brain food. It increases the capacity for mental labour, and acts as a general tonic. It rests the tired brain, and imparts thereto new life and energy.

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WE are glad to learn that another eminent Physician has written to acknowledge the benefit he has derived from wearing Mr. Harness' Electropathic Belt. He says that after wearing it for a fortnight he was completely cured of "lassitude, sluggish liver, constipation, indigestion, and more or less insomnia." Fac-simile copy of his letter may be had gratis, together with Book of Testimonials and Descriptive Pamphlet, on application to the Medical Battery Co. (Limited), 52, Oxford-street, London, W.

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Descriptive Illustrated Pamphlet may be obtained free of charge, either personally or by letter on application to the Medical Battery Co. (Limited), 52, Oxford-street, London, W. All communications are regarded as strictly private and confidential, and should be addressed to Mr. C. B. HARNESS, the President of the Company. Consultation free.

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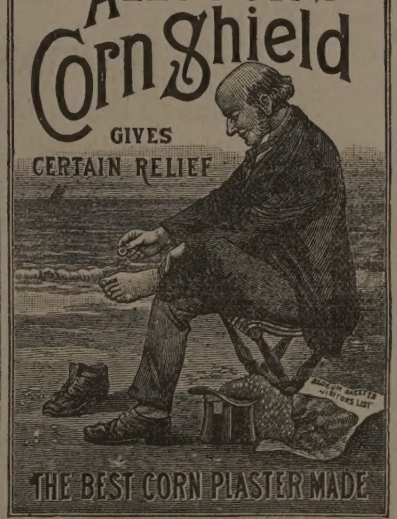

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